



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HARPOLD *et al.*

Serial No.: 07/938,154

Filed: April 3, 1991

For: HUMAN NEURONAL NICOTINIC
ACETYLCHOLINE RECEPTOR
COMPOSITIONS AND METHODS
EMPLOYING SAME

Art Unit: 1812

Examiner: Ulm, J.

I hereby certify that this paper and the attached
papers are being deposited with the United
States Postal Service as first class mail in an
envelope addressed to:

Assistant Commissioner for Patents,
Washington, D.C. 20231, on this date

7/02/96

Date

Sherrie K. Stewart

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**INFORMATION DISCLOSURE STATEMENT
IN ACCORDANCE WITH 37 C.F.R. §§ 1.97(b) and 1.98**

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

This Information Disclosure Statement is connection with a Submission under Rule 129(a), mailed on April 25, 1996. Any fees that may be due in connection with filing this paper may be charged to Deposit Account No. 02-4070.

In accordance with the duty of disclosure imposed by 37 C.F.R. §1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§1.97-1.98. Forms PTO-1449 (12 pages) and copies of the cited documents are provided herewith.

Provided herewith (reference EC) are copies of portions of correspondence directed to a representative of the Assignee of the above-captioned application from a representative (i.e., Mr. John A. Redmond) of Receptor Genetics, Inc. One of these pieces of correspondence is dated August

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2, 1990, one is dated August 6, 1990, two pieces are dated August 9, 1990, another is dated August 13, 1990, and the sixth piece is dated September 13, 1990. Reference is made to nicotinic acetylcholine receptors in these communications.

The correspondence dated September 13, 1990, purports to provide cDNA sequence information about **partial $\alpha 4$** and **$\beta 4$** nicotinic clones. This piece of correspondence includes two attachments: one labeled "Sequence of an $\alpha 4$ nAChR cDNA Segment," and the other labeled "Sequence of a $\beta 4$ nAChR cDNA Segment." Each attachment shows nucleic acid sequence, three different amino acid sequences apparently corresponding to three possible reading frames of the nucleic acid sequence and restriction enzyme sites contained within the nucleic acid sequence.

Analysis of each attached nucleotide sequence indicates that neither encodes a complete subunit protein. Neither the letter nor the attachments provide any information regarding which, if any, of the three reading frames may accurately reflect possible coding sequence, or the location of translation initiation and termination sites for use in identifying the N- and C-termini of any potential deduced protein sequence. Each of the potential reading frames contains numerous translation termination codons (as signified by the designation "End" in the corresponding deduced amino acid sequences). None of the three potential reading frames gives rise to a methionine translation initiation site at the beginning of the sequence. In fact, for each of the three potential reading frames, there is a translation termination codon prior to the occurrence of the first methionine codon. Two of the three possible amino acid sequences in both attachments end in repeated question marks.

Although the document is made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references is effective as prior art against the subject application. In

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accordance with 37 C.F.R. §1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. §1.56(b) exists.

Applicant also makes known to the Examiner the following related, co-pending applications:

<u>U.S.S.N</u>	<u>Inventor</u>	<u>Filing date</u>
08/484,722	Elliott <i>et al.</i>	June 7, 1995
08/467,574	Elliott <i>et al.</i>	June 5, 1995
08/466,589	Elliott <i>et al.</i>	June 5, 1995
08/487,596	Elliott <i>et al.</i>	June 7, 1995
08/496,855	Elliott <i>et al.</i>	June 20, 1995

<u>International Applications</u>	<u>Filing date</u>
EPO 91914376.8	August 7, 1991
Canada 2,087,532	August 7, 1991
Japan 513766/91	August 7, 1991
PCT/US91/02311	April 3, 1991
Canada 2,078,572	April 3, 1991
EPO 91908704.9	April 3, 1991
PCT/US94/02447	March 8, 1994
Australia 65173/94	March 8, 1994
Canada 2,155,330	March 8, 1994
EPO 94912758.3-2105 (Publication No. 0688361)	March 8, 1994
Japan 520240/94	March 8, 1994
United Kingdom 9503600.5	March 8, 1994
PCT/US94/12859	November 8, 1994
United Kingdom 9503690.1	November 8, 1994

With reference to the plasmid referred to in the above-captioned application, it is also noted that DNA sequence analysis of the human cDNA insert contained in plasmid HnAChR α 2 (ATCC Accession no. 68277) reveals that it lacks five nucleotides that are present in the coding sequence of the nicotinic acetylcholine receptor α_2 subunit-encoding DNA amplified from cDNA prepared from human thalamus RNA. These five nucleotides are located at positions 450-454 of the coding sequence. Attention is directed to co-pending U.S. Patent Application Serial No. 08/496,855.

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Applicant respectfully requests that the Examiner review the foregoing information and references and make them of record in the file history of the above-captioned application.

* * *

Respectfully submitted,
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